



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Indian Health Service
Spokane District Office
1919 E. Francis Avenue
Spokane, WA 99208

November 5, 2007

Ron Sather, Maintenance Manager
7 Cedars Casino
270756 Highway 101
Sequim, WA 98382

RE: 7 Cedars Sanitary Survey

Dear Mr. Sather:

I would like to thank you for your assistance helping Indian Health Service (IHS) complete the sanitary survey for the 7 Cedars Casino water system. This assessment of the water system is intended as a tool for identifying areas needing improvement. Enclosed is the Water System Sanitary Survey Report conducted on October 24, 2007. The following is a summary of recommendations generated from the sanitary survey. IHS technical assistance is available for correcting any deficiencies.

Proposed Recommendations:

1. **Groundwater** – It is recommended the original well be properly abandoned if it isn't going to be utilized by the system. Located in a vault, the well is vulnerable to storm water runoff and vehicle spillage. Since the main well is also located in a parking lot vault, a basic wellhead protection plan should be considered.
2. **Security** – A fence should surround the water storage tank to prevent trespassing of unauthorized personnel.
3. **Emergency Planning** – A vulnerability assessment is helpful for identifying threats to the water system, determining actions to take if an emergency did occur, and establishing a contact list of people to be notified. An example may include the failure of the submersible pump in the well. Contact information would include customers, chain-of-command, and pump service providers. A long-term solution would include measures for hauling water to the casino.

Please feel free to call me at (509)484-9341 Ext. 224 with any questions, comments, or concerns regarding the assessment details. There is a two-week review period set aside for you to respond with any changes or clarifications. If no comments are received, a copy of this report will be sent to Region X Federal EPA Drinking Water Program on November 29, 2007.

Sincerely,

LCDR. Darren Ausdemore, PE
Tribal Utility Consultant
Spokane District IHS

Cc: Steven Anderson, PAO DUC

#105300108

Sanitary Survey - Survey Responses

PWS Number: EPA #105300108

Survey ID: 13

Survey Date: 10/24/2007

Survey Name: Jamestown S Klallam 7 Cedar Casino

User Name: Darren Ausdemore

Question Number

General / SDWIS Site Visit Info

1 Reason for the visit.

- ☒ SNSV - Sanitary Survey ☐ TRNG - Training
☐ SSVF - Sanitary Survey Follow-up ☐ LABC - Laboratory certification
☐ SHAZ - Sanitary Hazards Investigation ☐ EMRG - Emergency assistance
☐ TRTP - Water Treatment Plant Site ☐ ENGR - Engineering

2 Date of the survey:

10/24/2007

3 Inspector's Name:

☒ Darren Ausdemore

4 Inspector's organization:

☒ Indian Health Service

5 Next inspection due date:

10/24/2017

General / Background Info

Name/Location:

1 Name of public water system:

Jamestown S'Klallam 7 Cedars Casino

2 EPA number:

105300108

General / Background Info

Classification:

1 Primary water source:

- ☐ GU - Groundwater under the direct influence of surface water ☐ SW - Surface Water
☐ GUP - Groundwater under the direct influence of surface water ☐ SWP - Surface Water purchased
☒ GW - Groundwater
☐ GWP - Groundwater purchased

2 Maximum Daily Production (GPD):
(Based on a 12-hour pump run time per day)

12,000

3 SDWA classification of system:

- ☐ C - Community
☐ NC - Non Community transient
☐ NP - Non Public
☒ NTNC - Non Transient Non Community

Question Number

- 4 Total Number of Connections: 2
- 5 Number of residential service connections: 0
- 6 Estimated Residential population: 600
- 7 Purchase water?
- ☐ Yes
☒ No
☐ NA
☐ Unknown
- 7.01 If yes, name of system purchased from:

General / Background Info

Owner:

- 1 Owner type:
- ☐ F - Federal
☐ L - Local
☐ M - Mixed
☒ N - Native American
- ☐ P - Private
☐ S - State Government
- 2 Legal ownership by (name or entity)
- Jamestown S'Klallam Tribe
- 3 Owner's address line1:
- 1033 Old Blyn Highway
- 4 Owner's address city:
- Sequim
- 5 Owner's address state:
- WA
- 6 Owner's address zip code:
- 98382
- 7 Owner's telephone number
- 360-683-1109

General / Background Info

Staff:

- 1 Main operator's last name Sather
- 2 Main operator's first name Ron
- 3 Main operator's address 270756 Highway 101 ? Sequim, WA 98382
- 4 Main operator's telephone 360-681-6734
- 5 Main Operator's Certification Level

Notes: None

☐ WDM1
☐ WDM2
☐ WTPO
- 6 Emergency contacts: Ron Sather
- 7 Emergency contacts: telephone number 360-681-6734

General / Background Info

Previous Survey Info:

- 1 Date of last sanitary survey: 06/11/2002
- 2 Last survey conducted by: Craig Paulsen, EPA; Ron Sather, 7 Cedars

Notes: Also Present
Vickie Carroll, Former Tribal Water Operator

General / Background Info

Current Survey Info / History:

- 1 Have there been any violations in the past year?

Notes: 1/12/2007 - Violation 27
5/24/2007 - Violation 24

☒ Yes
☐ No
☐ NA
☐ Unknown
- 1.01 If yes, list violations

Question Number

2 Have there been any interruptions in service during the past year?

No

General / Background Info

Current Survey Info / Participants:

1 Survey team members present during the survey:

Ron Sather, 7 Cedars Maintenance Manager

Regulations / General

1 Is the system in compliance with various provisions of the National Primary Drinking Water Regulations (NPDWR)?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

2 What is the operator certification level required for this facility ?

WDS preferred

3 Is the system staffed by properly certified operators?

Potential Deficiency

- ☐ Yes
☒ No
☐ NA
☐ Unknown

Regulations / Plans/Records

1 Is a total coliform rule (TCR) sample siting plan available for review?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

2 Are the following records maintained and available for review:

2.01 Bacteriological Analysis - 5 years retention.

- ☒ Yes
☐ No
☐ NA
☐ Unknown

2.02 Chemical Analysis - 10 years retention.

- ☒ Yes
☐ No
☐ NA
☐ Unknown

2.03 Records of actions taken to correct violations - 3 years retention.

- ☒ Yes
☐ No
☐ NA
☐ Unknown

2.04 Copies of reports, summaries or communication related to Sanitary Surveys - 10 years retention.

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Question Number

- 2.05 Copies of reports, summaries or communication related to reports concerning variances or exemptions - 5 years retention. ☒ Yes
☐ No
☐ NA
☐ Unknown
- 2.06 Copies of reports, summaries or communication related to copies of public notices issued - 3 years retention. ☒ Yes
☐ No
☐ NA
☐ Unknown

Regulations / Monitoring

- 1 Are certified laboratories utilized when required? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 2 Is the PWS out of compliance with any monitoring requirements? ☐ Yes
☒ No
☐ NA
☐ Unknown
- 2.01 If yes, identify the nature of the non-compliance.

- Potential Deficiency 3 Has the PWS been in compliance with all monitoring requirements for the past 24 months? ☐ Yes
☒ No
☐ NA
☐ Unknown
- 4 Have samples for the following parameters been accomplished according to the applicable schedule?
- 4.01 Coliform: ☒ Yes
☐ No
☐ NA
☐ Unknown
- 4.02 IOCs: ☒ Yes
☐ No
☐ NA
☐ Unknown
- 4.03 Nitrates: ☒ Yes
☐ No
☐ NA
☐ Unknown
- 4.04 Radionuclide: ☐ Yes
☐ No
☒ NA
☐ Unknown
- 4.05 VOCs: ☒ Yes
☐ No
☐ NA
☐ Unknown
- 4.06 SOCs: ☒ Yes
☐ No
☐ NA
☐ Unknown

Question Number

4.07 DBP's:

- ☒ Yes
☐ No
☐ NA
☐ Unknown

4.08 If no, explain.

Sources / General

General:

1 Are there any abandoned, unused, or auxiliary sources?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Potential Deficiency

Notes: A second well is also located in a parking lot vault. The well is disconnected from the system.

2 Does the system have redundant sources?

No

Notes: A third well is found in a building southeast of the casino. The well is connected to the system but not in operation.

Sources / General

Quantity:

1 Does system have an operational master meter?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

2 Does the system have interconnections with neighboring systems or a contingency plan for water outages?

- ☐ Yes
☒ No
☐ NA
☐ Unknown

Potential Deficiency

Sources / Groundwater

Wells / General:

1 Does the system have well construction log(s) on file?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

2 Is drawdown measured?

- ☐ Yes
☒ No
☐ NA
☐ Unknown

Potential Deficiency

Notes: Drawdown was last measured when it was drilled in 1987.

3 Is the source located in a well house?

- ☐ Yes
☒ No
☐ NA
☐ Unknown

Notes: The well is located in a concrete vault in the parking lot.

4 Capacity of the Well:

30 GPM

Notes: Data based on bailer test done when drilled.

5 Latitude decimal measure:

N 48 01.341

Question Number

- 6 Longitude decimal measure: W 123 00.627
- 7 Has a GWUDI Assessment been done for the source?
☐ Yes
☐ No
☐ NA
☒ Unknown
- 7.01 If yes, what was the date of the assessment?

Sources / Groundwater

Wells / Security:

- 1 Is the wellhead protected from access by unauthorized personnel?
☒ Yes
☐ No
☐ NA
☐ Unknown
- Notes: Wellhead is secured with bolts. Vault is unable to be locked.
- 2 Is lightning protection provided?
No

Sources / Groundwater

Wells / SW Protection:

- 1 Is the well in a confined or unconfined aquifer?
☒ Confined
☐ Unconfined
- 2 Is there a Source Water Protection Plan developed for this source?
☐ Yes
☒ No
☐ NA
☐ Unknown
- Potential Deficiency
- 2.01 If yes, date of the plan:
- 3 Is the well located in the proximity of any potential sources of pollution?
☐ Yes
☒ No
☐ NA
☐ Unknown
- 4 Are the following minimum distances from the PWS well being met?
- 4.01 Any potential source of contamination within 50 Ft.
☐ Yes
☒ No
☐ NA
☐ Unknown
- 4.02 Sewer line within 100 Ft.
☐ Yes
☒ No
☐ NA
☐ Unknown

Question Number

4.03	Individual home septic tank within 100 Ft.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
4.04	Individual home disposal field within 100 Ft.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
4.05	Individual home seepage pit within 100 Ft.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
4.06	Livestock within 100 Ft.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
5	Are there abandoned wells that have not been properly plugged and sealed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
Potential Deficiency		
6	Is the upper termination of the well protected?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
7	Is the well cased and sealed in such a manner that surface water cannot enter the well?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
8	Is the well house protected from flooding and does it have adequate drainage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
	Notes: <div style="border: 1px solid black; padding: 2px;">There is some concern of flooding the vault in the parking lot. Drainage appeared to be adequate with no standing water being present.</div>	
9	Is the floor drain connected to sewer, storm drains, chlorination room drains or any other source of contamination?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
10	Is the well house kept clean, in good repair and not used to store toxic or hazardous material?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
11	Is the sump for well house floor drains located at least 30 feet from the well?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> Unknown

Sources / Groundwater

Wells / Construction:

1	What is the depth of the well in feet?	57
2	What is the depth of the casing in feet?	220

Question Number

3 What is the depth of grouting in feet?

221

4 Does the casing extend a minimum of 12 inches above the finished ground surface or 6 inches above the well house floor?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Notes: The casing extends approximately 5 feet above the vault floor.

5 Is grouting or a concrete pad surrounding the casing at the well?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

6 What type of pump is used for this well?

- ☐ CF - Centrifugal
☐ HP - Hand Pump
☐ JT - Jet
☐ PD - Positive Displacement

- ☐ SC - Screw
☒ SU - Submersible
☐ VT - Vertical Turbine

7 Is the sanitary seal properly installed and maintained?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

8 Is the well vented with the open end of the vent screened and terminated downward at least 12 inches above the ground or pumphouse floor?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Notes: Vent wasn't found during the survey. However, the previous survey did identify a vent was present.

9 If the well has a pitless adapter or pitless unit, is it third party approved?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

10 Is the pitless adapter designed, constructed and installed to be water tight including the cap, cover, casing extension and other attachments?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

11 Is the discharge line from the well equipped to allow the well to be pumped to waste via an approved air gap?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Treatment / General

General:

1 Is a finished water sampling tap provided?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Treatment / General

Safety:

1 Are permanent ladders or handholds provided on the inside walls of basins above the water level?

- ☐ Yes
☐ No
☒ NA
☐ Unknown

2 Does the PWS provide stairways, ladders and handrails where needed?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Question Number

- | | | |
|---|--|---|
| 3 | Are treads of non-slip material provided where needed? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 4 | Is ventilation provided in all rooms, compartments, pits and other enclosure where unsafe atmosphere may develop or where excessive heat may be? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 5 | Are all confined space entry procedures done in accordance with OSHA requirements? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Treatment / General

Chemical Use:

- | | | |
|---|---|---|
| 1 | Have operators been trained to use the safety equipment? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 2 | Is there a Hazard Communication Program in place? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 3 | Are safe practices followed during chemical handling and mixing? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 4 | Are floor surfaces smooth and impervious, slip-proof and well drained ? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 5 | Do the operators know where all of the chemical application points are and which points are being utilized? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 6 | Is a deluge shower and/or eyewashing device installed where strong acids and alkalis are used or stored? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Potential Deficiency

- | | | |
|----|--|---|
| 7 | Are all materials that are in contact with chemicals resistant to the aggressiveness of that particular chemical? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 8 | Are incompatible chemicals stored separately? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 9 | Is an anti-siphon device provided so that liquid chemical solutions cannot be siphoned through solution feeders into the water supply? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 10 | Are chemicals stored in covered or unopened shipping containers? (unless the chemical is transferred into an approved storage unit) | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Question Number

- | | | |
|----|---|---|
| 11 | Do daily operating records reflect chemical dosages and total quantities used? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 12 | Are provisions made for measuring the quantities of chemicals used? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 13 | Is there adequate space in the facility for storage of all chemicals required in the treatment process? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 14 | Are the chemical storage areas clean and as dry as possible? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 15 | Is there appropriate safety equipment (e.g. cartridge respirator for calcium hypochlorite) and PPE (e.g. goggles, gloves, etc.) available and in use? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 16 | Are liquid chemicals used? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 17 | Are dry chemicals used? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Pump House / General

- 1 What is the name & location of this pumping station?

Submersible Pump in Well

- 2 What is the purpose of this pumping station?

- ☒ Source Water Pumping ☐ Other
☐ Internal Plant Water Pumping
☐ Finished Water Pumping
☐ Pressure Booster Pumping

- 3 Where does this pumping station pump from and to?

Well to Storage Tank & Distribution System

- 4 What is the maximum daily production of this pumping station? (GPD)

12,000

Notes: Average production

- 5 How is pump output capacity determined?

- ☒ in-line flow meter
☐ portable flow meter
☐ suction well draw-down
☐ other

- 6 Is the output capacity verified at least annually?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Question Number

- | | | |
|----|---|---|
| 7 | Are all pumping units operable? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 8 | Is all of the pumping equipment in good condition? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 9 | Are the pumps located in a pumping station? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| | Notes: Treatment and plumbing tree are housed in room connected to the casino. | |
| 10 | Is security around the pumping station adequate? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| | Notes: Due to the location of the vault, fencing and padlock aren't practical
Treatment room is locked. | |
| 11 | Is the pump facility properly protected against unauthorized entry? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Pump House / Design

- | | | | |
|----------------------|--|--|---|
| 1 | What type of pump(s) are at this pumping station? | <input type="checkbox"/> CF - Centrifugal
<input type="checkbox"/> HP - Hand Pump
<input type="checkbox"/> JT - Jet
<input type="checkbox"/> PD - Positive Displacement | <input type="checkbox"/> SC - Screw
<input checked="" type="checkbox"/> SU - Submersible
<input type="checkbox"/> VT - Vertical Turbine |
| 2 | Are there at least two equal and functioning pumping units? (Note: For well systems, consider other wells) | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| Potential Deficiency | Notes: The well is in the process of being put online. | | |
| 3 | Can equipment be accessed for maintenance and removal from the building? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 4 | Is each pump discharge line equipped with: | | |
| 4.01 | a positive-acting check valve between the pump and the isolation valve? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input checked="" type="checkbox"/> Unknown | |
| | Notes: It is assumed check valves are installed on pump drop pipe. | | |
| 4.02 | isolation gate valves? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 4.03 | pressure gauge? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 4.04 | flow meter? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |

Question Number

5	Is an air release valve located between the source and check valve? (Recommended for Vertical Turbine Pumps)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
Potential Deficiency	Notes: <u>ARV is located on static mixing tank.</u>	
5.01	Is the discharge line from the air release valve properly protected to prevent the entrance of contaminants?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
6	Are the pumps controlled manually?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
7	Are pumps controlled automatically?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
7.01	What type of automatic control function is used?	<input checked="" type="checkbox"/> Pressure <input type="checkbox"/> Flow <input type="checkbox"/> Time <input type="checkbox"/> Other
	Notes: <u>Floats are used for pump controls.</u>	
8	Are chemical feeders tied to the pump controls?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
	Notes: <u>Ozone generators are tied to controls.</u>	
8.01	If yes, what chemicals are fed?	<u>Ozonation</u> <hr/> <hr/>
9	Are all controls protected inside a waterproof cabinet?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown

Distribution / Design

1	What kind of piping materials are in the distribution system?	<input type="checkbox"/> Cast Iron / Ductile Iron <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Asbestos - Cement <input type="checkbox"/> Copper	<input type="checkbox"/> Steel
	Notes: <u>Service lines are copper.</u>		
2	Do any water lines have dead ends?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown	
2.01	How many dead-ends are in the system?	<u>3</u>	
3	Are there any main lines that have a diameter of less than 3 inches?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown	
4	Do all water mains that provide fire flow have a diameter of at least 6 inches?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown	

Question Number

- | | | |
|------|---|---|
| 5 | Are there any bottle necks in the piping system? (A small diameter pipe connected on both ends by larger diameter pipe) | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 6 | Are separate pressure zones provided? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 6.01 | If yes, are there automatic operating pressure regulating valves (PRV's) separating the zones? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 7 | Is there a need for pressure zones? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 8 | Was asbestos/cement pipe used in the system? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 8.01 | If yes, has asbestos analysis been done? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 9 | Are all materials used in the system manufactured according to ANSI/AWWA Standards? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 10 | Does the system have adequate valves? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 11 | In cold climates, are all pipes buried below the frost line? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 12 | Are air relief valves provided where necessary? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 13 | Are water and sewer (sanitary or storm) mains separated by a horizontal distance of 10 ft. or greater? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 14 | Is there a minimum horizontal distance of 25 ft. between a subsurface disposal system and any water distribution pipe? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 15 | Are cast iron and steel pipe protected from external corrosion? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Distribution / Records & Plans

- 1 Is an adequate map maintained of the distribution system? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 2 Are distribution system problem areas identified on a system map? ☐ Yes
☐ No
☒ NA
☐ Unknown
- Notes:
- 3 Are the maps updated as changes to the system are made? ☒ Yes
☐ No
☐ NA
☐ Unknown

Distribution / Construction

- 1 Are proper bedding and backfill procedures used with new or repaired pipes? ☒ Yes
☐ No
☐ NA
☐ Unknown
- Notes:
- 2 Are concrete thrust blocks or restraining fittings used at all elbows, tees and dead ends? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 3 Are pressure and/or leak tests performed on all new pipe construction? ☒ Yes
☐ No
☐ NA
☐ Unknown

Distribution / Pressure/Flow

- 1 Does the system maintain a minimum working pressure of 35 psi and a normal working pressure of 60 psi measured at the consumer's tap? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 2 Is the PWS capable of providing sufficient water during maximum hourly demand conditions (including fire flow) to maintain a minimum pressure of 20 psi within the system measured at the consumer's tap? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 3 Does the the system maintain a minimum working pressure of 35 psi and a normal working pressure of 65 psi measured at the consumers tap? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 4 Is the fire flow adequate? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 5 Are there areas with chronic low pressure problems? ☐ Yes
☒ No
☐ NA
☐ Unknown

Question Number

- | | | | |
|----------------------|--|---|--------------------------------|
| 6 | How often are pressure readings taken in the distribution system? | <input type="checkbox"/> Daily
<input checked="" type="checkbox"/> Weekly
<input type="checkbox"/> Monthly
<input type="checkbox"/> Annually | <input type="checkbox"/> Other |
| 7 | Is system pressure monitored and recorded at high and low elevations and the farthest distance from the pressure source? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| Potential Deficiency | | | |
| 8 | If there are PRVs, can the operator describe how they work and what they do? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 10 | Are there areas with chronic low pressure problems? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| Potential Deficiency | | | |
| 11 | Is there is a computer-aided hydraulic model of the distribution system | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 11.01 | If yes, has it been calibrated to actual conditions? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 11.02 | When was it last updated? | _____ | |
| 11.03 | Does it show any low pressure conditions? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 12 | Does the operator regularly record pressure readings on both sides of the PRV? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 13 | If there are pressure zones controlled by automatic Pressure Regulating Valves (PRVs), do they work properly? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown | |
| 14 | If a PRV should fail, is there a system in place that will automatically notify the operator? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown | |

Distribution / Cross-Connections

- | | | |
|---|--|---|
| 1 | Are there cross-connections in the distribution systems which are owned or controlled by the water system? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 2 | Are there any cross-connections between the distribution system and any pipes, pumps, hydrants, or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into the system? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Question Number

- | | | |
|------|--|---|
| 3 | Does the water system have a program to control the use of fire hydrants? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 4 | Are blow offs connected to sanitary or storm sewers or do they exit below flood level in ditches or streams? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 5 | Is potable water used for geothermal systems or heat exchangers? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 5.01 | If yes, is the distribution system protected from contamination and designed to prevent contamination? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 6 | Are the backflow prevention devices installed and tested at each site where backflow could cause a reduction in water quality? | None present
<hr/> <hr/> |
| 7 | Does the discharge piping on all air relief valves extend a proper distance above ground and flood level? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 8 | Are backflow preventers installed with isolation valves to facilitate removal and maintenance? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Distribution / Disinfection

- | | | |
|---|--|---|
| 1 | Are chlorine residuals tested at least daily in the distribution system? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 2 | Is the residual at least 0.2 mg/L prior to the first customer? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 3 | Is at least a trace of residual maintained at all points in the distribution system? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 4 | Are there an adequate number of sample sites and do they provide a representative sample of system conditions? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 5 | What disinfection procedure is used for new lines? | Unknown
<hr/> <hr/> |
| 6 | What disinfection procedure is used during repairs of broken lines? | Unknown
<hr/> <hr/> |

Question Number

- 7 Do water main disinfection procedures meet the AWWA C-601 Standard? ☐ Yes
☐ No
☐ NA
☒ Unknown
- 8 Does the utility use proper safety procedures for handling line disinfection chemicals? ☐ Yes
☐ No
☐ NA
☒ Unknown

Distribution / Maintenance

- 1 Is there a valve exercising program? ☐ Yes
☒ No
☐ NA
☐ Unknown
- Potential Deficiency
- 1.01 If yes, how often are the valves exercised? ☐ Monthly ☐ Other
☐ Quarterly
☐ Semi-Annually
☐ Annually
- 1.02 Is the number of turns required to close and open the valve recorded? ☐ Yes
☐ No
☐ NA
☐ Unknown
- 2 Is there a water main flushing program? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 2.01 If yes, is a systematic and unidirectional process used? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 2.02 Is there a written set of procedures for conducting unidirectional flushing? ☐ Yes
☐ No
☒ NA
☐ Unknown
- 2.03 How frequently is unidirectional flushing performed? 1
- Notes: Annually
- 3 Are all dead end water mains equipped with a means to flush the line? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 4 Are dead end water mains flushed at least semiannually? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 5 Is there a fire hydrant testing program, separate from the line flushing program? ☒ Yes
☐ No
☐ NA
☐ Unknown
- 5.01 If yes, does the system oversee this testing? ☒ Yes
☐ No
☐ NA
☐ Unknown

Question Number

- 6 Is there a leak detection program?
Potential Deficiency
- 7 Does the system have equipment for line location and leak detection?
Potential Deficiency
- ☐ Yes
☒ No
☐ NA
☐ Unknown
- ☐ Yes
☒ No
☐ NA
☐ Unknown

Distribution / Repairs

- 1 What is the frequency of main breaks per year?

- 2 Are the breaks primarily in one area?
- 2.01 What type of pipe is involved?
- 3 Does the utility perform their own water line repairs?
Notes: The utility does minor repairs.
- 3.01 If yes, do they have adequate equipment and repair materials in stock?
- 4 If contractors perform repairs do they respond in a reasonable amount of time?
- 5 Does the system maintain in its inventory (at a minimum) two full circle repair bands for each pipe size, two solid couplings for each pipe size, two bell-joint repair clamps, and one length of each type and size of pipe?
- 6 If repair materials are not kept in stock, can they be obtained in a reasonable amount of time?
- 7 Are there written procedures for isolation of portions of the system and for making main repairs?
- ☐ Yes
☒ No
☐ NA
☐ Unknown
- ☐ Yes
☒ No
☐ NA
☐ Unknown
- ☐ Cast Iron / Ductile Iron
☐ PVC
☐ Asbestos-Cement
☐ Copper
- ☐ Steel
- ☐ Yes
☒ No
☐ NA
☐ Unknown
- ☐ Yes
☐ No
☐ NA
☐ Unknown
- ☐ Yes
☐ No
☐ NA
☐ Unknown
- ☐ Yes
☒ No
☐ NA
☐ Unknown
- ☐ Yes
☐ No
☐ NA
☐ Unknown

Storage / General

- 1 Are there provisions established for maintaining the water supply when the storage tank is out of service for maintenance?
Potential Deficiency
- ☐ Yes
☒ No
☐ NA
☐ Unknown

Question Number

- | | | |
|---|---|---|
| 2 | Are there provisions designed in for draining and cleaning of the storage tank?

Notes: Tank is inspected and cleaned every five years. | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 3 | Are the storage structure and protective coatings approved by an ANSI accredited organization? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 4 | Is there a maintenance program for storage tanks? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 5 | Are all confined space entry procedures done in accordance with OSHA requirements? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 6 | Is ventilation provided in all rooms, compartments, pits and other enclosure where unsafe atmosphere may develop or where excessive heat may be? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Storage / Gravity

Design:

- | | | |
|---|--|---|
| 1 | Does the total storage on the system provide between 1 and 3 days of storage as compared to the average daily demand?

Notes: Water in the 210,000 gallon tank is aerated because of the low usage | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 2 | Is the storage capacity equal to or greater than the average daily consumption? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 3 | Is the storage system designed for direct pumping or floating on the distribution system? | <input type="checkbox"/> Direct Pumping
<input checked="" type="checkbox"/> Floating |
| 4 | If designed to allow both modes, in which mode is it being operated? | <input type="checkbox"/> Direct Pumping
<input type="checkbox"/> Floating |
| 5 | If operated in the "floating mode," is the tank volume included in the calculation for disinfectant contact time? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 6 | Is the elevation of the tank sufficient to maintain distribution pressure throughout the system? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 7 | Is the storage structure designed so that it can be isolated from the distribution system without necessitating loss of pressure in the distribution system? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 8 | Is storage structure safely accessible to the inspector and operator? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Potential Deficiency

Question Number

9	Is the storage structure secure from unauthorized access?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
10	Is the site protected against vandalism?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
Potential Deficiency		
11	Is the storage structure protected against flooding?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
12	Is the area surrounding the ground-level storage structure graded in a manner that will prevent surface water from standing within 50 feet of it?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
13	Is the bottom of the storage reservoir constructed a minimum of 4 feet above the high ground water table?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
14	Is the storage structure adequately protected from potential sources of contamination?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
15	Are all sewer lines outside a minimum 50 foot boundary from an in-ground storage tank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
16	Does the catwalk over finished water in a storage structure have a solid floor with raised edges?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/> Unknown
17	Does the storage reservoir have a watertight roof or cover and is it sloped so that water will drain?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
18	If tank is steel, is it protected against corrosion?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> Unknown
19	In cold climates, is the tank protected against icing?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
Potential Deficiency		
20	Is storage structure lined?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown
20.01	If yes, liner type:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> Unknown

Question Number

20.02 Is the liner approved by an ANSI accredited organization?

- ☐ Yes
☐ No
☐ NA
☐ Unknown

Storage / Gravity

Components:

1 Is all treated water storage covered?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

2 Does the tank appear to be structurally sound?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

3 Is cathodic protection provided?

- ☐ Yes
☒ No
☐ NA
☐ Unknown

3.01 If yes, are the cathodic protection access plates watertight?

- ☐ Yes
☐ No
☐ NA
☐ Unknown

3.02 Are cathodic protection rods in good condition?

- ☐ Yes
☐ No
☐ NA
☐ Unknown

3.03 Date cathodic rods were last changed.

4 Are overflow pipes:

4.01 Terminated 12 to 24 inches above the ground?

- ☐ Yes
☒ No
☐ NA
☐ Unknown

Potential Deficiency

4.02 Screened or fitted with a flapper gate?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

4.03 Directly connected to a storm sewer or sanitary sewer?

- ☐ Yes
☒ No
☐ NA
☐ Unknown

5 Are air vents:

5.01 Turned downward or covered from rain?

- ☒ Yes
☐ No
☐ NA
☐ Unknown

Question Number

- | | | |
|------|---|---|
| 5.02 | Terminated at a minimum of 3 diameters above the surface of storage tank roof? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 5.03 | Screened? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 6 | Are access opening covers overlapping, water tight, and greater than or equal to four inches above the tank roof surface? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 7 | Are outside access hatches locked? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 8 | Is there a roof penetration for a water level indicator cable, if so does the cable pass through a tight-fitting grommet? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 9 | Are there other roof penetrations, if so, are they sealed? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 10 | Do all elevated tanks with riser pipes over eight inches in diameter have protective bars over the riser openings inside the tank? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 11 | Do all water storage structures have ladders, ladder guards, balcony railing, and safely located entrance hatches provided where applicable? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 12 | Are ladders to tops of storage tanks terminated at least ten feet above the ground to deter unauthorized climbing? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 13 | Is there a climbing harness or other OSHA approved safety system available for accessing the top and interior of the tank for inspection and maintenance? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Storage / Gravity

Operation:

- | | | |
|---|--|---|
| 1 | Do storage tanks turn over at least once every 14 days? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input checked="" type="checkbox"/> Unknown |
| 2 | Is the tank being filled to capacity during automatic fill cycles? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 3 | Are instruments and controls adequate and operational? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Question Number

- | | | |
|------|---|---|
| 3.01 | Are they being utilized and maintained? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 4 | Does the operator understand what controls the water level or pressure in the tank and how to make adjustments? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 5 | Does low pressure level provide adequate pressure throughout the distribution system? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Storage / Gravity

Maintenance:

- | | | |
|---|--|---|
| 1 | Is the storage structure interior coating or liner peeling or cracked? | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input checked="" type="checkbox"/> Unknown |
| 2 | What is the frequency of interior inspection and cleaning? | <u>5 years</u>
<hr/> |
| 3 | Is this adequate? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 4 | What is the frequency of structural/protective coating inspections? | <u>weekly</u>
<hr/> |
| 5 | Is this adequate? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

- | | | |
|----|---|---|
| 6 | Are the structural / protective coating inspections done by a NACE certified inspector and in accordance with AWWA Standard D101? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 7 | Is VOC and coliform testing performed after painting?

Notes: Tank hasn't been painted since constructed. | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 8 | Following interior inspection / maintenance activities and before tanks are returned to service, are tanks disinfected in accordance with AWWA Standard C-652?
Notes: Tank is cleaned and inspected by divers. | <input type="checkbox"/> Yes
<input type="checkbox"/> No
<input checked="" type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 9 | Is leakage evident at time of inspection? | <input type="checkbox"/> Yes
<input checked="" type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |
| 10 | Are there provisions designed in for draining and cleaning of the storage tank? | <input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No
<input type="checkbox"/> NA
<input type="checkbox"/> Unknown |

Potential Deficiency

Question Number

- Potential Deficiency
- 11 Are there provisions established for maintaining the water supply when the storage tank is out of service for maintenance? ☐ Yes
☒ No
☐ NA
☐ Unknown
- 12 Are safety precautions followed for climbing tanks? ☒ Yes
☐ No
☐ NA
☐ Unknown

Management / General

- 1 Are customer water quality complaints recorded? ☐ Yes
☐ No
☒ NA
☐ Unknown
- Notes: Customers have not complained.
- 1.01 Are complaints responded to immediately? ☐ Yes
☐ No
☐ NA
☐ Unknown
- 2 Have any major complaints been received since the last sanitary survey? If yes, list in comments section. ☐ Yes
☒ No
☐ NA
☐ Unknown
- 3 What percentage of the customers' connections are metered? 100
- 4 Is there more than 15% of unaccounted-for-water? ☐ Yes
☒ No
☐ NA
☐ Unknown
- Potential Deficiency
- 5 Does the utility have a corrosion control program? ☐ Yes
☒ No
☐ NA
☐ Unknown

Management / Operations

- Potential Deficiency
- 1 Are routine operation and maintenance records kept? ☐ Yes
☒ No
☐ NA
☐ Unknown

Management / Maintenance

- Potential Deficiency
- 1 Is there an established and documented preventative maintenance (PM) program? ☐ Yes
☒ No
☐ NA
☐ Unknown
- 2 Are there sufficient facilities to store parts inventory, equipment, vehicles, traffic control devices and supplies? ☒ Yes
☐ No
☐ NA
☐ Unknown

Management / Construction Standards

- 1 Is there a set of construction standards used by the utility?

☒ Yes
☐ No
☐ NA
☐ Unknown

Notes: Major repairs are done by tribal construction.

- 2 Are in-house staff and contractors required to use the same standards?

☒ Yes
☐ No
☐ NA
☐ Unknown

Management / Staffing

- 1 Is the main operator properly certified?

☐ Yes
☒ No
☐ NA
☐ Unknown

Potential Deficiency

- 2 Is a certified operator available at all times as required by the authority?

☐ Yes
☒ No
☐ NA
☐ Unknown

Potential Deficiency

- 3 Are there sufficient personnel for operation and maintenance of the water system?

☒ Yes
☐ No
☐ NA
☐ Unknown

CEDARS WATER SYSTEM PICTURES
EPA #105300108

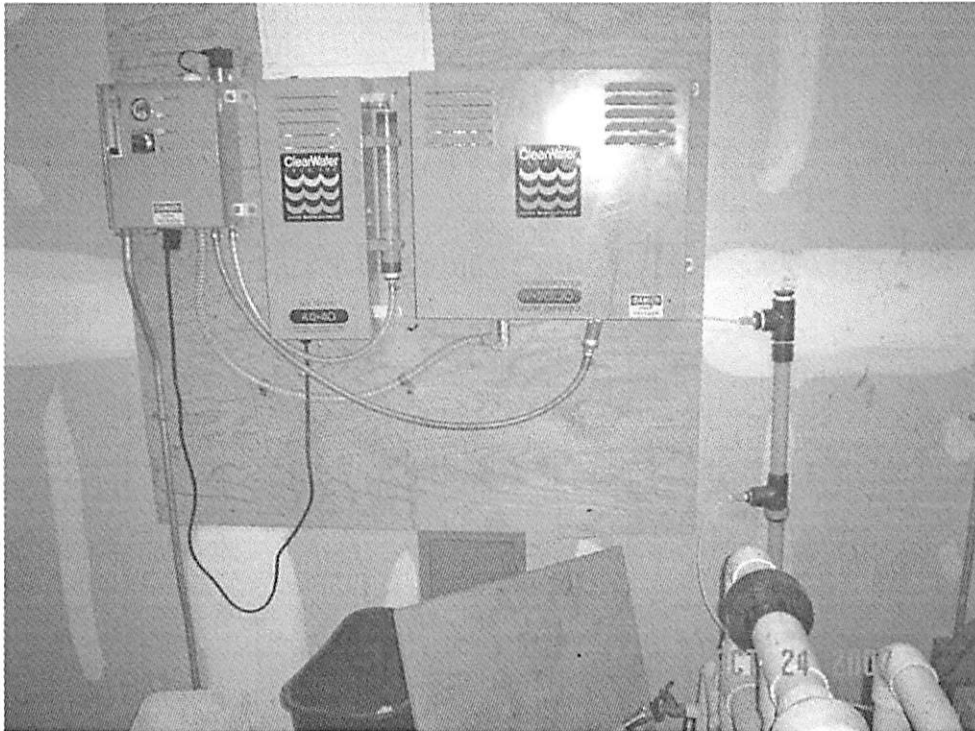


Main well located inside parking lot vault



Ozone contact tank and multimedia pressure filters with backflush

CEDARS WATER SYSTEM PICTURES
EPA #105300108



Ozone generator and air dryer unit



Bolted steel tank with safety ladder, water level target, overflow pipe with flapper valve, and air compressors for interior bubblers